WILDERNESS EVALUATION

William O. Douglas Adjacent - 617045

16,491 acres

OVERVIEW

History

The original area was studied under RARE II as D6032 which was peripheral to the Cougar Lakes wilderness proposal areas. It was not recommended for wilderness. The entire area was inventoried as roadless in the fall of 1983. It consisted of the old RARE II areas C, D, and E 6032 and was called Cougar Lakes. It was these three areas that were involved in various wilderness proposals including RARE II, Pritchard-Lowery, and President Carter. The majority of the area became wilderness under the Washington State Wilderness Act of 1984. The area was renamed William O. Douglas Wilderness in honor of the late Supreme Court Justice who was a regular visitor to the area throughout his life. As of 1990, there were 22 separate roadless parcels. Roading and timber harvest has fragmented several of those parcels and there are now 27 separate parcels although total roadless acreage has been reduced since 1990.

The 2006 inventory removed approximately 3,994 acres from previous inventory due to road construction and logging; 2,485 acres were added to the previous inventory as they met the criteria for a potential wilderness area as described in Forest Service Handbook (FSH) 1909.12, Chapter 70. The following chart depicts the 1990 Wenatchee National Forest Land and Resource Management Plan direction for the 2006 potential wilderness area.

Table 1--Management area percentages (rounded)

Wenatchee National Forest						
EW1	**GF**	**MP1**	**RE1**	**RE2B**	**ST1**	**ST2**
10%	14%	7%	3%	1%	25%	40%

Location and Access

The potential wilderness area (PWA) is made up of numerous parcels adjacent to the William O. Douglas Wilderness and is accessed via Highways 410 and 12 and the Bethel Ridge, Bumping, and Nile Loop Roads.

Geography and Topography

The topography ranges from gentle to steep; the slopes are mostly convex and uniform. These units are relatively small and scattered. Generally, the parcels lie on lower slope

positions although there are parcels located in the vicinity of both Chinook Pass and White Pass.

Elevations range from 3,300 to 6,200 feet.

Current Uses

The current use is for dispersed recreation. There are established motorcycle and 4 x 4 trails within parcels adjacent to the William O. Douglas Wilderness on the eastern and southern boundaries. Big game hunting is a major activity in the fall in most of the parcels as well as in the adjacent wilderness.

Appearance and Surroundings

This area has a moderate visual variety of landforms, vegetation, rock forms, and water forms (lakes and streams).

The area has highly textured vegetative patterns. The patterns are created by a large variety of species of mixed conifers, densely vegetated drainage bottoms, rocky ridges with some basalt rocks and rock formations along the ridge tops of side drainages.

The area is primarily viewed as foreground and middle-ground from trails that lead into the William O. Douglas Wilderness and motorized trails (motorcycle and 4x4) in adjacent parcels, the Bumping Road, Mather Memorial Parkway (Highway 410), Little Bald Mountain, White Pass (Highway 12) and other Forest roads.

The William O. Douglas Adjacent Areas parcels are scattered along the boundary of the William O. Douglas Wilderness. The parcels tend to be narrow due to the presence of nearby roads such as Highway 410, Highway 12, the Bumping Road, and numerous Forest roads.

Key Attractions (if any)

Main features include Dog and Granite Lakes, North and South Fork of Rattlesnake Creek, and Indian Creek. Two parcels extend to the Cascade crest. The parcel at Chinook Pass abuts Mount Rainier National Park at the Cascade crest near Naches Peak. The Pacific Crest National Scenic Trail passes through the parcel at White Pass. Other features include portions of Meek's Table, Timberwolf Mountain, Clover Spring, and Cash Prairie.

WILDERNESS CAPABILITY

Level of Natural and Undeveloped Environment

The adjacent PWAs have retained much of their natural appearance and function although roading and timber harvest have reduced the overall acreage since the RARE II process and the more recent inventories. In conjunction with the adjacent William O. Douglas Wilderness, there are opportunities for solitude and a sense of experiencing a remote and natural environment. All of the parcels are in relatively close proximity to roads and ongoing management activities.

The two noxious weed species that have been surveyed within this PWA include Canada thistle and bull thistle, each occurring on about four acres. Dog Lake contains introduced brook and rainbow trout, and Leech Lake contains introduced brook trout. The North and South Forks of Clear Creek near White Pass contain introduced brook and rainbow trout.

The William O. Douglas Adjacent PWA is impaired by light pollution from the Yakima, Naches, White Pass Ski Area, and greater Puget Sound metropolitan area. The lights from traffic on State Highway 12 may be visible from some vantage points within the PWA. The majority of the PWA (99 percent of the PWA) rates a Class 3 on the Bortle Scale. A small portion in the southern tip (1 percent of the PWA) rates as a Class 2. A Class 2 Typical Truly Dark Sky represents the darkest skies viewed in the continental United States. The summer Milky Way is highly structured to the unaided eye. Any clouds in the sky are visible only as dark holes or voids in the starry background. No light domes from population centers are visible. A Class 3 Rural Sky has some indication of light pollution on the horizon. Clouds may appear faintly illuminated in the brightest parts of the sky near the horizon, but are dark overhead. The Milky Way still appears complex. Light domes from population centers may appear on the horizon (10-15 degrees above horizon). Visual observing is still relatively unimpaired. Time lapse photography could be impaired by light pollution.

Water quality data is not available for most of the PWA; however, due to the relatively low level of disturbance water quality is assumed to be high. There may be localized disturbances due to grazing activities. Portions of the American River, Morse Creek, and Copper Creek are classified by the Washington State Department of Ecology as Category 1, which means the segment met tested standards. A portion of Dog Lake is classified by the Washington State Department of Ecology as Category 4c, which means impaired water quality is not due to a pollutant, and, in this context, is likely due to low water flow.

Level of Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation

The William O. Douglas PWA segments provide some opportunity for challenge especially in conjunction with adjacent wilderness. The dense vegetation and irregular topography of the Devil's Rim, Upper Nile, and Wildcat would offer some challenge to the inexperienced.

Many of the adjacent parcels are small and provide limited additional recreation opportunity except as supplemental to opportunities that exist in the wilderness. In general, big game hunting for deer and elk is a popular activity in the fall. Day use activities such as hiking, fishing, berry/mushroom picking, and dispersed camping also occur. Motorized trail use occurs in the Cash Prairie-Wildcat, and Upper Nile segments. Motorized snow grooming occurs within the White Pass segment. A privately owned patented mining claim lies within the White Pass segment.

Special Features

There have been sightings of peregrine falcon reported and several nest sites have been located. Northern spotted owl habitat and nest sites are present. Numerous unconfirmed

gray wolf sightings have been recorded through the years. The area also provides source habitat for wolverine and marten.

This PWA includes one sensitive plant species; tall agoseris (*Agoseris elata*).

The 2,285 acre Cedar Creek proposed Research Natural Area (RNA) lies within the PWA. Habitat types protected within this proposed RNA include mixed old-growth conifer/shrub forest and Pacific silver fir forest.

Manageability of Boundaries

Due to the large number of adjacent parcels included in this potential wilderness area the manageability and boundary characteristics will be described separately for each distinct geographic area.

Rainier Fork of the American River

This parcel is just east of Chinook Pass and south of Highway 410. There has been little impact from human activity in this parcel except a very primitive mine-to-market road that is used occasionally by motorized vehicles. State Highway 410 is very visible on the north side of this parcel and is apparent from the entire PWA. The west end of the parcel abuts Mount Rainier National Park near Naches Peak. The west end of the parcel could be easily defined by the Cascade Crest and use of a stream drainage. Inclusion of the rest of this parcel into wilderness would require moving away from the main stream drainage and upslope toward the highway.

A portion of this parcel could be incorporated to make a more manageable wilderness boundary but the inclusion of the whole parcel would not.

Chipmunk Creek/Fife's Creek Drainages

These areas are bounded by Forest roads and harvest units. Some of the area includes steep and rugged cliffs that are frequented by mountain goats. Portions of these parcels include stream drainages or roads that could be used to define a manageable boundary.

A portion of this parcel could be incorporated to make a more manageable wilderness boundary but the inclusion of the whole parcel would not.

Miner's Ridge

These parcels are bordered and dissected by roads and timber harvest units. All parcels lie downslope from Miner's Ridge. The ridge is the primary feature identifying the wilderness boundary. Early mining activities occurred in this area. Motorized vehicle travel to many of the unpatented mining claims on old mine-to-market roads continues to this day. If these parcels were added to wilderness in whole or part, the existing road system could be used to establish a new boundary. Use of roads to define the boundary would not be as effective as use of the current ridgeline boundary.

Devil's Rim

This parcel is bordered by forest roads and timber harvest. The area below Devil's Rim (to the North) remains unroaded and provides an island for wildlife escapement. The rim edge could be used as a manageable boundary; however, motorized use along that ridge would complicate management as wilderness.

Upper Nile/Devil Creek

These parcels are bordered by forest roads and harvest units. On high points within this segment you can see evidence of human activities such as harvest units and roads.

Meeks Table

This parcel is generally east and south of Meeks Table Research Natural Area and the William O. Douglas Wilderness. Human activities are readily visible from this parcel due to lack of vegetative screening. The current wilderness boundary generally follows the edge of the "table". Including these PWAs as add-ons to wilderness would require using a less easily defined boundary – possibly utilizing roads or contour lines.

Rattlesnake

This segment is bordered by forest roads and timber harvest units. Wilderness designation would eliminate the existing narrow corridor ("cherry stem") which would improve wilderness management capability somewhat.

Timberwolf

These parcels are heavily modified by fire as a result of early range burning. Human activities are visible from these parcels as well as some of the interior areas of the William O. Douglas Wilderness. Inclusion of a portion of one of the parcels would allow moving the wilderness boundary to the ridgeline which would improve manageability. Inclusion of the parcels in their entirety would require use of roads or less easily defined features as the boundary.

MJB

This parcel lies east of the wilderness boundary and is bordered by forest roads and harvest units. Designating this parcel as an add-on to wilderness would not improve the boundary from a management standpoint as it would move the boundary from the ridgeline down to a road or contour line.

Cash Prairie-Wildcat-Indian Creek

These parcels are bordered by roads and harvest units. There are no longer any working mines within these parcels although there is still evidence of primitive road access. There are no patented claims within the parcels. Portions of some of the parcels could be included as add-on to adjacent wilderness without compromising the manageability of the boundary. There is potential to utilize stream drainages and other features to expand the boundary. Most of the parcels, however, would require utilization of roads, contours, or other less obvious features to establish a new boundary. The Soup Creek area, south of Cash Prairie, is known for its rugged terrain, visible geologic strata and high scenic values.

Much of this area could be added to wilderness with a combination of natural features, contours, and/or roads being utilized as the boundary.

White Pass

This parcel almost completely surrounds a patented mining claim with road access to it, and also includes cross country ski trails that are groomed with a motorized trail groomer. Much of the area is under special use permit to the White Pass Company, Inc., for cross-country skiing. A power line with road access is also within the parcel. These parcels are extremely narrow, especially east of Dog Lake. The current wilderness boundary generally follows contours that are not readily identifiable on the ground. Including these parcels as add-ons would not change the manageability of the boundary; contours or setbacks from road features would likely be used.

AVAILABILITY FOR WILDERNESS

Recreation

Wilderness designation would preclude motorized trail use in several areas including Miner's Ridge, Devil's Rim, Upper Nile/Devil Creek, Rattlesnake, and Wildcat. Motorized grooming of Nordic ski trails would also be precluded in the White Pass area. There are extensive opportunities for dispersed recreation such as hunting and mushroom/berry picking and these opportunities would be retained with wilderness designation. The use levels of these types of activities are considered to be stable or on a slight upward trend. Wilderness designation would preserve the primitive recreation setting along those trails that already enter the William O. Douglas Wilderness.

Tourism marketing in the Yakima and Naches area emphasizes agrotourism and visiting wineries. The Naches Valley Chamber of Commerce website portrays the area as offering scenic drives on Highways 410 and 12, snow skiing, river rafting, hiking, hunting, snowmobiling, and bird watching. Links are provided to Forest Service web-based information. The William O. Douglas PWA is not directly promoted. Other than the Pacific Crest Trail and use of the White Pass Ski Area, use of this area is not strongly tied to non-local visitors.

Table 2--Miles of recreation trails

Motorized Trails	Non-motorized Trails	Snowmobile Trails
15	12	0

Wildlife

Major big game species such as elk, mule and black tail deer, and black bear are found in the area as well as mountain goat that inhabit areas around Timberwolf Mountain, Mount Aix, and American Ridge. Habitat for the northern spotted owl is in the area.

Blue grouse and ruffed grouse are among the game birds in the area.

The PWAs provide varying levels of habitat for focal wildlife species. To help evaluate the habitat these areas provide, the following information was provided: the focal species

emphasized in the area, amount of habitat for each focal species, the priority ranking for the habitat (based on conservation assessments and recovery plans), and the proportion of the total habitat available on the Forest that is within the PWA.

Table 3--Availability of habitat for federally listed Threatened and Endangered wildlife species and R6 Focal Species

Wildlife Species	Acres Habitat	Habitat Priority Ranking (1=high, 2-mod, 3=low)	%Total Forest Habitat In Evaluation Area
Wolverine	11,946	1	1
Marten	5,505	1	1

A key issue relative to the sustainability of wildlife habitats is the identification of the amount of dry forest that is in a late-successional habitat area (LSHA). LSHAs that occur in dry forests can be at high risk of high severity wildfire, and insects and disease that reduce the sustainability of the late-successional habitats. Active management, such as prescribed fire and thinning, may be needed to restore these habitats and enhance their sustainability.

Table 4--Acres of dry forest habitats that are present within the evaluation area and also within a Late Successional Habitat Area

Late Successional Habitat Area	Acres of Dry Forest
Bumping and Nile	Approx. 2,000

Water/Fish

The proposed William O. Douglas Adjacent PWA is composed of nine different pieces of land that are next to the boundary of the William O. Douglas Wilderness. The nine different areas are located in the following subwatersheds(6^{th} HUCs): American (1,156 acres, or 2 percent of the 50,763 acre subwatershed); Bumping (6,969 acres, or 9 percent of the 73,456 acre subwatershed); Naches River/River Rock (374 acres, or 1 percent of the 50,268 acre subwatershed); Naches River/Nile Creek (1484 acres, or 4 percent of the 34,222 acre subwatershed); Upper Rattlesnake (248 acres, or 1 percent of the 32,929 acre subwatershed); Lower Rattlesnake (1325 acres, or 4 percent of the 36,749 acre subwatershed); Little Rattlesnake (801 acres, or 5 percent of the 16,365 acre subwatershed); North Fork Tieton (2,275 acres, or 3 percent of the 68,281 acre subwatershed); and Lower Tieton (1,862 acres, or 3 percent of the 70,412 acre subwatershed). These subwatersheds contain the headwater sources of a number of streams in the Naches and Tieton River subbasins.

The U.S. Forest Service manages the following percentage in each subwatershed: American (78 percent); Bumping (98 percent); Naches/River Rock (77 percent); Naches/Nile Creek (79 percent); Upper Rattlesnake (99 percent); Lower Rattlesnake (47 percent); Little Rattlesnake (67 percent); North Fork Tieton (96 percent); and Lower Tieton (65 percent).

Stream reach conditions in the Upper Rattlesnake subwatershed that respond to natural and human-caused disturbances were evaluated as good because collected stream data values

were similar to expected values measured in high functioning stream habitat elsewhere on the Okanogan-Wenatchee National Forest. Subwatershed vegetation conditions match expected natural forest conditions; analyzed road effects were low. Vegetation condition and road effects considered cumulatively were rated as good. When vegetation condition and road effects were combined with measured stream responses to summarize overall subwatershed condition, Upper Rattlesnake subwatershed was rated as good.

Stream reach conditions in the Little Rattlesnake Creek subwatershed that respond to natural and human-caused disturbances were evaluated as good because collected stream data values were similar to expected values measured in high functioning stream habitat elsewhere on the Okanogan-Wenatchee National Forest. Subwatershed vegetation conditions were somewhat altered from expected natural forest conditions; analyzed road effects were moderate. Vegetation condition and road effects considered cumulatively were rated fair. When vegetation condition and road effects were combined with measured stream responses to summarize overall subwatershed condition, this subwatershed was rated as fair.

Stream reach conditions in the American, Bumping and North Fork Tieton subwatersheds that respond to natural and human caused disturbances were evaluated as fair because collected stream data values were lower than expected values measured in high functioning stream habitat elsewhere on the Okanogan-Wenatchee National Forest. Subwatershed vegetation conditions were somewhat altered from expected natural forest conditions; analyzed road effects were moderate. Vegetation condition and road effects considered cumulatively were rated as fair. When vegetation condition and road effects were combined with measured stream responses to summarize overall subwatershed condition, these subwatersheds were rated as fair.

When compared against unmanaged subwatersheds in good condition on the Okanogan-Wenatchee National Forest, some vegetation condition has changed from expected condition and road density is moderate for Lower Rattlesnake subwatershed. Considering changes in vegetation and road density in combination, these subwatersheds were rated as fair. Stream reach data has not been collected in sufficient quantity for analysis; therefore watershed conditions for this subwatershed have not been evaluated.

Stream reach conditions in the Naches/Nile Creek and Lower Tieton subwatershed that respond to natural and human-caused disturbances were evaluated as fair because collected stream data values were lower than expected values measured in high functioning stream habitat elsewhere on the Okanogan-Wenatchee National Forest. Subwatershed vegetation conditions were altered from expected natural forest conditions; analyzed road effects were substantial. Vegetation condition and road effects considered cumulatively were rated as poor. When vegetation condition and road effects were combined with measured stream responses to summarize overall subwatershed condition, these subwatersheds were rated as fair.

Stream reach conditions in the Naches/Rock Creek subwatershed that respond to natural and human-caused disturbances were evaluated as fair because collected stream data values were lower than expected values measured in high functioning stream habitat elsewhere on the Okanogan-Wenatchee National Forest. Subwatershed vegetation conditions were altered from expected natural forest conditions; analyzed road effects were

substantial. Vegetation condition and road effects considered cumulatively were rated as poor. When vegetation condition and road effects were combined with measured stream responses to summarize overall subwatershed condition, this subwatershed was rated as poor.

In the Bumping River subwatershed, Granite Creek supports native cutthroat trout and introduced brook trout. Rainier Creek has native westslope cutthroat trout. Rattlesnake Creek contains spawning and rearing habitat for steelhead, Chinook salmon, bull trout and westslope cutthroat trout. The North Fork Rattlesnake Creek is used by steelhead, westlope cutthroat trout, and habitat that could support native bull trout.

In the North Fork Tieton subwatershed, Wildcat and Kitten Creeks contain native westslope cutthroat. Indian Creek has spawning and rearing habitat used by bull trout and is one of the two major spawning streams of the Rimrock Lake population.

The potential wilderness area parcels in the Rattlesnake Creek subwatersheds are currently encumbered by an Executive Order (E.O.) dated February 20, 1923 that prevented land exchange and mining activity. The intent of President Harding's E.O. was to protect the City of Yakima's water supply.

The William O. Douglas Adjacent PWA has a water source protection area totaling 5,975 acres that contributes to a community water system for the City of Yakima Water Division. Another water source protection area totaling 18 acres contributes to a transient, non-community water system for the Fife BSA camp.

Range

This PWA is now made up of 27 roadless parcels adjacent to the William. O. Douglas Wilderness. All are now within portions of various recreation and livestock allotments (recreation stock allotments are not depicted in Table 5, as they are an annual approval for recreation purposes and do not fall under the commercial cattle and sheep grazing permits). The grazing potential is included within portions of eight inventoried allotments, four of which are recreation and four domestic, not all of which are currently active.

Table 5--Percentage of grazing suitability areas and current allotments

Percent Area Suitable for Cattle Grazing	Percent Area Currently in Cattle Allotments	Percent Area Suitable for Sheep Grazing	Percent Area Currently in Sheep Allotments
2	15	4	18

Vegetation and Ecology

Vegetation varies widely in the adjacent parcels as they are scattered along the entire boundary of the William O. Douglas Wilderness including the interior area in the Bumping River drainage. Areas near the Cascade crest, such as the White Pass/Dog Lake area, are climax mountain hemlock, Pacific silver fir, subalpine fir and Alaskan yellow cedar. The other extreme in vegetation is the low elevation, dry, rocky, river bottom area below the confluence of the Bumping and American Rivers. This area is open ponderosa pine, Douglas-fir with an understory of pine grass, pine mat, ceanothus and kinnikinnick.

The area is a mid-to-late successional stage. The primary tree species are Douglas-fir, western hemlock, mountain hemlock, western larch, grand fir, pacific silver fir, subalpine fir, Engelmann spruce, ponderosa pine, lodgepole pine, western red cedar, and Alaska yellow cedar. Stand composition in any specific area is dependant on a variety of factors including elevation and aspect. Non forest areas are primarily cliffs and open rocky areas with parklands, mesic meadows, and big sagebrush shrublands in some areas.

The Healthy Forest Restoration Act authorizes direction to implement fuel reduction projects in the WUI. The HFRA prohibits authorized projects in wilderness areas. With wilderness recommendation, options to utilize mechanical treatments to manage vegetation would be precluded. Generally, the priority for restoration treatments occurs within the WUI or within the dry and mesic forest groups. Because WUI represents over one third of the PWA, the prohibition on restorative treatments is a concern.

There may be a need to respond to needs in small portions of the dry and mesic forest portions of the WUI.

Timber Harvest Suitability

The underlying criteria for determining timber harvest suitability are found in the Forest and Rangeland Renewable Resources Planning Act of 1974, 36CFR219.12, and Forest Service Handbook 1909.12, Chapter 60.

For the Colville and Okanogan-Wenatchee National Forests, the general criteria for timber suitability that will be used for timber harvest suitability are:

- Is it forest land (10 percent crown cover minimum, productivity >20 ft^3/ac/yr).
- The area has not been withdrawn from timber harvest or production.
- Soil, slope, or other watershed conditions will not be irreversibly damaged (based on soil attributes for erosion, instability, or compaction potential, slopes >65 percent, and certain land types)
- Reforestation can be assured within five years (lack of shallow soils, low frost heave potential, low surface rock, plant community type, certain land types, and elevation <5,500 feet)
- Economic and technologic viability (<0.5 miles from existing transportation system, species value or condition, volume availability, logging systems)

In consideration of all the criteria for determining timber harvest or timber production suitability and not just the fact that harvestable species can grow at a specific location, it appears this PWA does not have conditions that pass all the criteria. The main criterion for failure is that unacceptable resource impacts would likely occur due to road construction activities. This does not preclude helicopter operations that could fly material over sensitive areas to adjacent road systems. However, in most if not all cases helicopter logging and the associated expenses (such as manual slash treatments) would not be an economically viable option.

Table 6--Stand data percentages

Suitable for Timber Harvest	Forest Groups		WUI	
0%	Parkland	9%	Total WUI	39%
	Cold Dry	1%	WUI in Dry and Mesic Forest	32%
	Cold Moist	64%		
	Mesic	9%		
	Dry	14%		
	Non-forest	2%		

Fire

Fire occurrence, fire regime, and condition class varies within the William O. Douglas Adjacent Area by parcel. Each distinct geographic area will be described separately. It is important to note that when considering fire occurrence levels (low, moderate, or high), the assigned rank is a subjective value of the number of fires, given the size (acres) of the parcel.

Rainier Fork of the American River

Fire occurrence is low for the twenty-five years of suppression records on file, consisting of four human-caused fires and one lightning-caused fire. All fires within this parcel were less than 0.1 acres in size. This area is best described as Fire Regime 5, Condition Class 1. Fire Regime 5 experiences a fire return interval of 200 or more years, with fires burning at stand replacement or mixed severity. In Condition Class 1, the vegetation composition, structure, and fuels are similar to those of the natural regime and do not predispose the system to fire loss.

Chipmunk Creek/Fife's Creek Drainages

Only one fire is recorded within these two PWAs since 1970, making fire occurrence low. This area would best be described as Fire Regime 3, Condition Class 3. Fire Regime 3 depicts a fire return interval of 35-100 or more years with mixed severity. Landscapes were a mosaic of fire severity. Some areas have not departed from historical condition, but many areas have become more homogenous. Condition Class 3 describes a condition where the vegetation composition, structure and fuels have a high departure from the natural and predispose the system to high risk of loss to fire of key ecosystem components.

Miner's Ridge

Six lightning-caused fires of 0-2 acres have been recorded since 1970, indicating a low fire occurrence level. This area is best described as Fire Regime 5, Condition Class 1 (see narrative of Rainier Fork of the American River for description).

Barton Creek

No fires have been recorded in twenty-five years for this area, indicating very low fire occurrence. This area is best described as Fire Regime 5, Condition Class 1 (see narrative of Rainier Fork of the American River for description).

Thunder Creek/American Ridge

Five human-caused fires, each less than 0.1 acres in size, have been recorded in these two small parcels, indicating a low to moderate fire occurrence level. This area is best described as Fire Regime 5, Condition Class 1 (see narrative of Rainier Fork of the American River for description).

Devils Rim

Fire occurrence is moderate for the twenty-five years of suppression records on file, consisting of seven human-caused fires and two lightning. All fires recorded were 0-0.1 acres in size. This area would mostly be described as Fire Regime 4, Condition Class 2. Fire Regime 4 describes a fire return interval of 35-100 or more years with stand replacement severity. Landscapes were a mosaic of large landscape patches of even-aged stands. High density over large areas is a departure from normal. In Condition Class 2, the vegetation composition, structure and fuels have a moderate departure form the natural regime, and predispose the system to high risk of loss to fire of key ecosystem components.

Upper Nile/Devil Creek

Fire occurrence within the Upper Nile/Devil Creek parcels is moderate to high for the twenty-five years of suppression records on file. Lightning is the primary ignition agent, accounting for eight of the twelve ignitions. Fires are typically less that ½ acre in size, although one human-caused fire grew to 144 acres. This area is best described as Fire Regime 3, Condition Class 3 (see narrative of Chipmunk Creek/Fife's Creek drainages for description).

Meeks Table

Fire occurrence is moderate for the twenty-five years of suppression records on file in these two parcels. All fires within these parcels were less than ¼ acre in size. Three of the fires were caused by lightning, the other two from human origin.

The forested areas would best be described as Fire Regime 3, Condition Class 3 (see narrative of Chipmunk Creek/Fife's Creek drainages for description).

Some of the non-forest areas in the eastern of the two parcels are best fit into Fire Regime 2, Condition Class 2. Fire Regime 2 is by definition shrub, steppes and meadows. This fire regime naturally experiences a fire return interval of 0 to 35 years of stand replacement severity. In Condition Class 2 the vegetative composition, structure and fuels have a moderate departure from the natural regime, and predispose the system to risk of loss to fire of key ecosystem components.

Rattlesnake

Five lightning and three human-caused fires have occurred in this parcel since 1970. Given a relatively small area, this indicates a high level of fire occurrence. Three of these fires have been between one and five acres in size, the rest being 0.1 acres or less. This area is best described as Fire Regime 3, Condition Class 3 (see narrative of Chipmunk Creek/Fife's Creek drainages for description).

Timberwolf

No fires have been recorded in twenty-five years for these two areas, indicating very low fire occurrence. This area is best described as Fire Regime 5, Condition Class 1 (see narrative of Rainier Fork of the American River for description).

MJB

Two lightning-caused fires, each less than 0.1 acres have occurred within this parcel which indicates a low fire occurrence. This area is best described as Fire Regime 5, Condition Class 1 (see narrative of Rainier Fork of the American River for description).

Cash Prairie

Five fires, only one of which was lightning-caused have occurred within this parcel. This would indicate a fire occurrence level of moderate. All fires were less than 0.1 acres in size. This parcel is largely Fire Regime 4, Condition Class 2 (see narrative of Devils Rim for description), with the lower elevations and eastern boundary being Fire Regime 3, Condition Class 3 (see narrative of Chipmunk Creek/Fife's Creek drainages for description). Upper elevations are broken talus slopes and rock outcrops, with occasional shrublands and mesic meadows fitting Fire Regime 2, Condition Class 2 (see narrative of Meeks Table for description).

Wildcat

Only three fires have occurred in this relatively large (for William O. Douglas Adjacent Area) parcel. One lightning fire grew to two acres, while the other lightning fire and one human-caused were less than 0.1 acres. This indicates a low fire occurrence for this parcel. This area includes Fire Regime 5, Condition Class 1 (see narrative of Rainier Fork of the American River for description), largely on the north side of Russell Ridge. Fire Regime 3, Condition Class 3 (see narrative of Chipmunk Creek/Fife's Creek drainages for description) is on the west end of the parcel.

Indian Creek

Since 1970, two fires were recorded in this PWA, a relatively low fire occurrence. These human-caused fires were under 0.1 acres in size. This area is approximately 50 percent Fire Regime 3 (see narrative of Chipmunk Creek/Fife's Creek drainages for description), Condition Class 3, and 50 percent Fire Regime 4, Condition Class 2 (see narrative of Devils Rim for description).

White Pass

There have been sixteen fires in this parcel, indicating a high fire occurrence. It is important to note that all but the four lightning-caused fires were concentrated around Dog

Lake and White Pass Campgrounds, with campfires being the most common ignition source. This area is best described as Fire Regime 5, Condition Class 1 (see narrative of Rainier Fork of the American River for description).

Insects and Disease

The Wilderness Act of 1964 allows for the control of insects and disease, but taking such actions in wilderness is rare. Forest Service wilderness policy (Forest Service Manual 2324.11) directs the agency "to allow indigenous insect and plant diseases to play, as nearly as possible their natural ecological role". Policy also directs the agency to "protect the scientific value of observing the effect of insects and disease on ecosystems and identifying genetically resistant plant species", and finally, "to control insect and plant disease epidemics that threaten adjacent lands or resources."

A portion of this PWA is comprised of a parkland forest group and is known to support stands of whitebark pine. Due to a combination of anthropogenic causes (introduced white pine blister rust, global warming, and fire suppression leading to high severity wildfires) coupled with predation from native mountain pine beetles, whitebark pine stands are at risk across their range. These whitebark pine stands are of inherent value as a plant community, for providing important habitat for wildlife including the federally listed grizzly bear, and for their aesthetics in contributing to the social setting. Wilderness designation would limit restoration options for these stands. Manipulations would only be considered in order to protect the composite wilderness resource, and only as a last resort to preserve naturalness at the expense of trammeling.

An aerial survey of this PWA was completed in the vicinity of this PWA in 2007. A variety of insects and diseases have had considerable impact on the forest stands included in the William O. Douglas Adjacent PWAs. Extensive defoliation has occurred since 2000 due to western spruce budworm infestations. High levels of root disease are common in many of the parcels. Western spruce budworm defoliation has been occurring since about 2000 in virtually all areas. Light defoliation is occurring in the Upper Nile/Devil Creek area, with moderate to heavy defoliation in all other areas. Top kill with some mortality is occurring in many of the areas. There are pockets of fir engraver, Douglas-fir bark beetle, mountain pine beetle, and western pine beetle infestations with resulting mortality in host species. In general, there are high levels of root disease and heavy fuel loadings in all areas. There are high levels of dwarf mistletoe in the Meeks Table, Cash Prairie, and Wildcat areas. The White Pass area also has high levels of stem decay.

Threatened, Endangered, and Sensitive Plant Species

This PWA includes one sensitive plant species, tall agoseris (*Agoseris elata*).

Noxious Weeds

The two noxious weed species that have been surveyed within this PWA include Canada thistle and bull thistle, each occurring on about four acres.

Minerals and Soils

Much of the entire area appears to be underlain by pre-Tertiary metavolcanic rocks. The parcels south of Bumping Lake are primarily underlain by Tertiary volcanic and by

Tertiary intrusive igneous rocks of granitic composition. Elsewhere the parcels along the periphery of the William O. Douglas Wilderness are underlain by Quaternary to Oligocent sedimentary and volcanic rocks. Some of the eastern parcels are capped by Miocene basalt flows, remnants of the Columbia River Basalt group.

The area has been investigated by the U.S.G.S. and U.S. Bureau of Mines as part of their study of the William O. Douglas Wilderness. As a result of their study, they identified the Miners Ridge area near some of the subject parcels as having a "probable" mineral potential. Many of the parcels do, however, lie within a north-northwest trending metallogenic province which includes the Morris Creek-American Ridge, Copper City-Deep Creek, Bumping Lake, Rattlesnake, and Wildcat-Indian Creek areas. The minerals of interest occurring within these areas include copper, gold, silver, molybdenum, tungsten, mercury, and manganese.

Of much interest are those parcels lying within the Copper City-Deep Creek or Miner's Ridge area which have probably a low potential for the occurrence of tungsten, copper, and molybdenum. Much of these areas are now designated as wilderness and therefore withdrawn from mineral entry. Other portions of this PWA have similar mineral potential, plus probable low potential for mercury, manganese, and iron. However, based up BLM mining claim recordation data (2/11/2005), there has not had much mining interest. Currently, there are two placer claims for building stone near Dog Lake and one placer claim along the American River in the northwest portion of the area. The building stone placers have never been developed and are probably held for speculative purposes only.

Most of the area has been classified "prospectively valuable" for geothermal resources, while only a small area around the headwaters of Nile Creek have been classified "prospectively valuable" for oil and gas. Interest in area geothermal resource potential was indicated in the late 1970s by eight lease applications. The applications were dropped when the area was designated as wilderness. Even though the area has little apparent oil and gas potential, as with other areas of the Forest, some of the subject lands were leased during the 1980s. No significant exploration occurred and all leases were terminated.

About 50 percent of the soils have developed in basaltic materials, 20 percent in pyroclastic materials, 15 percent in granitic materials, 10 percent in glacial till, and the balance, 5 percent, in alluvial materials. The basaltic and pyroclastic materials tend to become slippery and sticky when wet and are easily compacted when moist. The granitic, glacial till, and alluvial materials are typically not slippery or sticky when wet. The materials will also compact, but not as easily. Soil depths generally range from 20 to 40 inches; however, the alluvial soils are often more than 60 inches deep.

Cultural and Heritage Resources

Roughly a dozen archaeological sites (including isolated stone tools, lithic scatters, talus pits and rock cairns) have been reported within and near the proposed William O. Douglas Adjacent units, attesting to seasonal prehistoric use for resource procurement and possibly religious/ceremonial use. Historic uses included grazing and trapping, and several units in the vicinity of Copper City are near mines and mining communities active through the 1930s. Unless a site has been determined to be ineligible for the National Register, it is managed as a significant site until such a determination is made. Cultural sites are

protected by law; however, a wilderness designation or a roadless designation would afford additional protection to cultural sites from ground disturbing activities.

Land Uses and Special Uses

There is permitted outfitter guide use that utilizes various trail segments in the area. This includes both backpacking and stock supported trips.

Portions of the area are included in range allotments managed under term grazing permit.

Recently, the City of Yakima filed a preliminary permit application with the Federal Energy Regulatory Commission to study water storage opportunities within the Rattlesnake drainage. The proposed project could affect portions of Sections 9, 10, 11; T. 15 N., R. 14 E. WM. Status of the study is unknown at this time.

The City of Yakima has water withdrawal rights dated January 20, 1964 that provides a municipal water supply originating from drainages in this proposed PWA.

The William O. Douglas adjacent units fall entirely within lands ceded to the U.S. Government under the Yakama Treaty. Indian tribes hold rights reserved under treaty and recognized in statutes, executive orders and policies. Generally, these include rights to fish at usual and accustomed grounds and stations, the right to hunt and gather on open and unclaimed lands, the right to erect temporary houses to cure fish, and the right to pasture horses and cattle on open and unclaimed lands.

Private Lands

Near Dog Lake and accessed off of Highway 12 are the Sno-Queen and Ace in the Hole patented claims. These claims total approximately 30 acres and are almost entirely encompassed by roadless acres. The Sno-Queen is an active mining operation and would have considerable effect on primitive recreation experiences if the surrounding lands were designated wilderness. Access to the mine is via a short gravel road directly off Highway 12. The mines are within one-quarter mile of the Dog Lake Campground and the Cramer Lake and Dark Meadows Trails.

NEED FOR WILDERNESS

Location and size of other wildernesses in the general vicinity, and distance from area and population centers:

These parcels are adjacent to the William O. Douglas Wilderness (168,232 acres). The Goat Rocks Wilderness (107,018 acres) is to the south across Highway 12. Norse Peak Wilderness (52,180 acres) is to the north across Highway 410. Mount Rainier National Park (228,480 acres, 97 percent of which is designated wilderness) lies to the west and is adjacent to the William O. Douglas Wilderness. The area is roughly two hours driving time from the Puget Sound basin (Seattle, Tacoma, Olympia) and one hour from Yakima.

In ranking this PWA for its potential to provide a high quality wilderness recreation setting it ranked as high due to adjoining the William O. Douglas Wilderness. Many trails entering the wilderness pass through this PWA enroute. Much of the area is reasonably accessible off of highways. The PWA provides high quality scenic destinations that would attract

wilderness users. In addition, interconnected trail systems would facilitate both day trips and overnight use.

Present visitor pressure on other wildernesses, trends, and changing patterns of use:

Overall use in the nearby wildernesses is generally moderate with some notable high use areas in both the White Pass and Chinook Pass areas. The majority of use is by hikers/backpackers with significant amounts of stock use in the Norse Peak, Goat Rocks and William O. Douglas wildernesses. Slight to moderate increases in use are predicted for the near future with most of the increase coming as day use versus overnight use. Day use is particularly high in the White Pass and Chinook Pass areas. The Pacific Crest National Scenic Trail can be accessed at either pass.

Extent to which non-wilderness lands provide opportunities for unconfined outdoor recreation experiences:

These adjacent areas provide considerable opportunities for primitive forms of recreation in conjunction with the adjacent William O. Douglas Wilderness. Wilderness designation would preserve the continuity of the unconfined and primitive recreation setting.

The Wenatchee and Okanogan National Forest provide a variety of roadless areas that are not designated wilderness. Some portions of these areas allow motorized use, whereas other areas are non-motorized. Other potential wilderness areas in the vicinity that provide some opportunities for unconfined recreation include Bethel Ridge and Manastash.

The need to provide a sanctuary for those biotic species that have demonstrated an inability to survive in less than primitive surroundings or the need for a protected area for other unique scientific value or phenomena:

Wildlife

This area provides habitat for a number of species that require primitive surroundings including westslope cutthroat trout, bull trout, anadromous fish species, peregrine falcon, gray wolves and wolverines. Preservation of the area as wilderness would contribute to providing sanctuary for these species. Active management such as prescribed fire and thinning, may be needed to restore the sustainability of northern spotted owl habitat in dry forest, and thus would not be compatible with wilderness designation in these locations. The wildlife sustainability index is 17.4 (a moderate relative ranking) and the habitat connectivity index is 13.8 (also moderate relative ranking).

Fish

Several native species in the interior Columbia River Basin have demonstrated an inability to survive in less than primitive surroundings, especially the bull trout. In addition to habitat changes on National Forest System lands, other factors off forest such as hydropower generation, hatchery programs, harvest, and changing ocean conditions further challenge the persistence of some far-ranging native species. Broad-scale assessments have demonstrated a positive correlation between unroaded areas and persisting native fish

stocks. Often, assessments like these don't differentiate between wilderness and roadless areas; rather they combine the two into an "unroaded" category. These assessments show current strongholds (most secure and robust populations) are dependant on wilderness and roadless areas. Some of the more resilient native fish populations in the Interior Columbia Basin are located in unroaded areas on National Forest System lands.

For the Okanogan-Wenatchee National Forest PWAs were assigned an aquatic ranking based on federally listed and sensitive fish species that are sensitive to human disturbances. A high ranking was assigned when listed fish species occur in the PWA or when ecological process including high quality water help sustain listed fish species downstream of the PWA. All other PWAs are ranked low. This PWA is assigned a high ranking based on these factors.

Rare Plant Species

An analysis was completed to prioritize which PWAs would contribute the most to providing refugia for those plant species on the species of interest/species of concern (SOI/SOC) list. The analysis ranked three factors. The first factor, the total number of sites occurring within the PWA, ranked as low for this PWA. The second factor, which ranked as moderate for this PWA, examined the degree of rarity of any SOI/SOC species present, and also recognized the importance of individual PWAs in supporting a high incidence of populations relative to Washington state as a whole.

PWAs are generally unsurveyed for rare plants due to a relative lack of projects occurring in these areas. Thus an additional factor examined the potential for the PWA to support SOI/SOC species. Based on databases, first the SOI/SOC plant species were identified that are present within a five-mile radius of the PWA, but are not known to occur within the PWA. Then the PWA was analyzed to see if the potential habitat for these species occurs within the PWA. Based on this analysis, this PWA ranks as high.

Finally, a composite score was assigned to each PWA based on combining each of the rankings described above. This PWA ranks overall as moderate priority for preserving rare plant refugia with a wilderness designation.

Ability to provide for preservation of identifiable landform types and ecosystems:

This area represents the East Cascades Ecoregion using Bailey's Ecoregion Classification System. This ecoregion type is well represented in existing wilderness lands in the Cascade Range. Portions of the area are mapped as having Columbia Basin basalt flows. These landforms are underrepresented in wilderness.

An analysis compared vegetative cover types that are under-represented in wilderness on the National Forest System in Region 6 with those same cover types present in the PWA. Large-scale cover types were available through existing data layers and represent approximately 13 percent of the vegetative cover of this PWA (approximately 2,130 acres). These types include forb lands, alpine meadows, non-alpine meadows, and ponderosa pine. Taken as a whole, the contribution of underrepresented vegetation types ranks as moderate for the portion of this area with underrepresented cover types, and also as moderate for the number of acres that are represented within this PWA relative to the other PWAs in the planning area.

Some under-represented cover types fill microhabitats such as riparian areas or perched water tables. Such finer scale cover types represented in this PWA include sparse amounts of cottonwood and quaking aspen.

In particular, the non-alpine meadow cover type, which comprises approximately 1,500 acres in this PWA, would make a significant contribution within the eastern Washington planning area.